

Notice of Allowability

Application No.

09/830,540

Examiner

Raymond S. Dean

Applicant(s)

KOWALEWKI, FRANK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 19, 2006.
2. ☒ The allowed claim(s) is/are 29, 31 - 45.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. William G. Valance (Reg. No. 28,275) on September 1, 2006.

Regarding Claim 29, Please delete the word "and" after the phrase "radio link;" in line 7 and replace "and" with- **"at least one channel estimator comprising means for determining an estimate of an impulse response of each of said radio channels (20, 25); and"**-. Please insert- **"according to said estimate of said impulse response for each of said radio channels"**- in between the word "signals" and the semicolon ";" on line 9.

Regarding Claim 30, Please cancel Claim 30.

Regarding Claim 37, Please delete the phrase "and transmitting" from line 2. Please delete the phrase "transmitted over corresponding radio channels (20, 25)" from line 3 and replace with- **"to and"**-. Please insert- **"transmitting and"**- in between the word "for" and the word "receiving" on line 2. Please insert- **"over corresponding radio channels (20, 25)"**- in between "(1)" and the semicolon ";" on line 4. Please

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insert- **“so that estimates of the impulse responses of said corresponding radio channels are derived from said respective weighted reference signals in said another radio station (1)”**- in between “(20, 25) and the comma “,” on line 7. Please insert- **“, said corresponding received signals comprising pre-equalized signals obtained by a pre-equalization performed according to said estimates of said impulse responses and transmitted from said another radio station (1)”**- in between the word “signals” and the semicolon “;” on line 14.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance:

Regarding Claim 29, Antonio further teaches at least one channel estimator (11,12) and wherein said at least one channel estimator comprises means for determining an estimate of an impulse response of each of a plurality of radio channels and said pre-equalization of said radio signals occurs according to said estimate of the impulse response of the radio channel that said radio signal is transmitted on (See Column 10 lines 27 – 30, Column 12 lines 13 – 17, since the IIR estimates the channel impulse response there is an inherent channel estimator, since the modulator can process multiple CDMA channels, the components that make up said modulator, such as the IIR, can process multiple CDMA channels, the IIR can determine the impulse response for each channel and pre-equalize a signal that is to be transmitted on a particular channel according to the impulse response of said particular channel). The

prior art of record, however, fails to teach or show **said pre-equalization occurring according to the estimate of the impulse response for each of the radio channels.**

Claim 37 is allowable for the same reasons set forth above.

Claims 31 – 36 and 38 – 45 are allowable for the same reasons set forth in the Office Action dated April 6, 2006.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

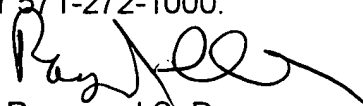
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean
September 1, 2006



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000